



**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2020-0618; Product Identifier 2019-SW-064-AD; Amendment 39-21288; AD 2020-21-15]**

**RIN 2120-AA64**

**Airworthiness Directives; Airbus Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for Airbus Helicopters Model AS-365N2, AS 365 N3, EC 155B, EC155B1, and SA-365N1 helicopters. This AD requires inspecting the tail rotor gearbox (TGB) housing recess, and depending on the inspection results, performing more in-depth inspections and removing certain parts from service. This AD also prohibits installing a TGB unless it has passed certain inspections and has a new TGB control rod bearing installed. This AD was prompted by the discovery of a foreign object obstructing the oil duct of a TGB control bearing. The actions of this AD are intended to address an unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain documents listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this final rule, contact Airbus Helicopters, 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone 972-641-0000 or 800-232-0323; fax 972-641-3775; or at <https://www.airbus.com/helicopters/services/technical-support.html>. You may view the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. It is also available on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0618.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0618; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the European Union Aviation Safety Agency (EASA) AD, any service information that is incorporated by reference, any comments received, and other information. The street address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Rao Edupuganti, Aviation Safety Engineer, Regulations and Policy Section, Rotorcraft Standards Branch, FAA, 10101

Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5110; email  
rao.edupuganti@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to Airbus Helicopters Model AS-365N2, AS 365 N3, EC 155B, EC155B1, and SA-365N1 helicopters. The NPRM published in the *Federal Register* on June 23, 2020 (85 FR 37591). The NPRM proposed to require opening the TGB oil filter plug cover and removing the TGB oil filter plug, and then borescope inspecting for oil retention and visibility of the two T holes in the TGB housing recess. If there is any oil retention and the two T holes are not completely visible, the NPRM proposed to require removing the TGB control rod and inspecting for and removing any foreign object in the TGB oil duct. The NPRM also proposed to require re-inspecting the TGB housing recess with all of the oil drained. If, during the re-inspection, there is any oil retention and the two T holes are not completely visible, the NPRM proposed to require replacing the TGB. If, during the re-inspection, there is no oil retention and the two T holes are completely visible, the NPRM proposed to require inspecting for and removing any foreign object from the TGB oil duct and inspecting the TGB oil duct for correct oil flow. If the oil does not flow correctly, the NPRM proposed to require replacing the TGB. If the oil flows correctly, the NPRM proposed to require removing the TGB control rod bearing from service. The NPRM also proposed to prohibit the installation of a TGB unless it passes the proposed inspections. A non-installed TGB would be inspected in a level position using shims.

The NPRM was prompted by EASA AD No. 2019-0165-E, dated July 12, 2019, issued by EASA, which is the Technical Agent for the Member States of the European Union, to correct an unsafe condition for Airbus Helicopters (formerly Eurocopter, Eurocopter France, Aerospatiale, Sud Aviation) Model AS 365 N2, AS 365 N3, EC 155 B, EC 155 B1, and SA 365 N1 helicopters. EASA advises of a foreign object that was found obstructing the oil duct of the TGB control bearing during a routine inspection, causing a lack of lubrication on the bearing. EASA states this condition, if not detected and corrected, could affect the correct operation of the TGB and possibly result in reduced control of the helicopter. Accordingly, the EASA AD requires a one-time inspection of the TGB housing recess and TGB oil duct housing, and depending on the findings, applicable investigative and corrective actions. The EASA AD also prohibits installation of a TGB unless it has passed the specified inspections.

### **Comments**

The FAA gave the public the opportunity to participate in developing this final rule. The following presents the comment received on the NPRM and the FAA's response to the comment.

### **Request**

A commenter asked who will be conducting the TGB inspections and how often the inspections will take place. A mechanic that meets the requirements of 14 CFR part 65 subpart D must perform the TGB inspections, which are required within 55 hours time-in-service or 5 months, whichever occurs first.

## **FAA's Determination**

These helicopters have been approved by EASA and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the European Union, EASA has notified the FAA of the unsafe condition described in its AD. The FAA is issuing this AD after evaluating all of the information provided by EASA and determining the unsafe condition exists and is likely to exist or develop on other helicopters of the same type designs and that air safety and the public interest require adopting the AD requirements as proposed except for updating the Costs of Compliance section due to an increase in the number of registered helicopters. These changes are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition and do not add any additional burden upon the public than was already proposed in the NPRM.

## **Differences Between this AD and the EASA AD**

If required to remove a TGB, the EASA AD requires marking and returning the TGB to Airbus Helicopters, whereas this AD does not require marking or returning the TGB to Airbus Helicopters.

## **Related Service Information Under 1 CFR part 51**

The FAA reviewed one document that co-publishes four Airbus Helicopters Emergency Alert Service Bulletin (EASB) identification numbers: No. 65.00.09 for non FAA-type certificated military Model AS565MA, MB, MBe, SA, SB, and UB helicopters; No. 65.00.19 for Model AS365N1, N2, and N3 helicopters, and non FAA-type certificated military Model AS365F, Fi, K, and K2 helicopters; No. 65.06 for non FAA-type certificated military Model SA366GA helicopters; and No. 65A008 for

Model EC155B and B1 helicopters, all Revision 0 and dated July 10, 2019. EASB Nos. 65.00.19 and 65A008 are incorporated by reference in this AD. EASB Nos. 65.00.09 and 65.06 are not incorporated by reference in this AD.

This service information specifies procedures, using an endoscope (borescope), to inspect the TGB housing recess for oil retention and the two T holes for visibility. If there is oil retention and the two T holes are not visible, this service information specifies removing the TGB control rod and inspecting for and removing any foreign objects in the TGB oil duct, and then repeating the TGB housing recess inspections. If there is oil retention and the two T holes are not visible after these additional inspections, the service information specifies marking the TGB as not fit for helicopter installation and returning the TGB to Airbus Helicopters. If there is no oil retention and the two T holes are visible after these additional inspections, the service information specifies removing any foreign objects in the TGB oil duct and inspecting for proper oil flow at the end of the BTP oil duct cover. If the oil does not flow properly, this service information specifies marking the TGB as not fit for helicopter installation and returning the TGB to Airbus Helicopters. If the oil flows properly, the service information specifies replacing the TGB control rod bearing with a new bearing.

This service information also specifies procedures to close the filter plug cover with an airworthy O-ring, install the filter plug, replace a TGB, and perform a ground run-up. Additionally, this service information specifies procedures to perform the inspections on a non-installed TGB.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

### **Costs of Compliance**

The FAA estimates that this AD affects 51 helicopters of U.S. Registry. The FAA estimates that operators may incur the following costs in order to comply with this AD. Labor rates are estimated at \$85 per work-hour.

Inspecting the TGB housing recess takes about 2 work-hours for an estimated cost of \$170 per helicopter and \$8,670 for the U.S. fleet.

Inspecting for and removing any foreign objects takes a minimal amount of time for a nominal cost.

Removing any oil retention and re-inspecting the TGB takes about 5 work-hours for an estimated cost of \$425 per helicopter.

Inspecting for correct oil flow takes about 1 work-hour for an estimated cost of \$85 per helicopter.

Replacing the TGB control rod bearing takes about 8 work-hours and parts cost about \$2,000 for an estimated replacement cost of \$2,680 per bearing.

Replacing a TGB takes about 40 work-hours and parts cost about \$48,600 (overhauled) for an estimated replacement cost of \$52,000 per TGB.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator.

Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on helicopters identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.



## **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**2020-21-15 Airbus Helicopters:** Amendment 39-21288; Docket No. FAA-2020-0618; Product Identifier 2019-SW-064-AD.

#### **(a) Applicability**

This AD applies to Airbus Helicopters Model AS-365N2, AS 365 N3, EC 155B, EC155B1, and SA-365N1 helicopters, certificated in any category.

#### **(b) Unsafe Condition**

This AD defines the unsafe condition as obstruction of the oil duct of the tail rotor gearbox (TGB) control bearing. This condition could result in a lack of lubrication on the TGB control bearing, which could affect the correct operation of the TGB, and subsequent reduced control of the helicopter.

#### **(c) Effective Date**

This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(d) Compliance**

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

**(e) Required Actions**

(1) Within 55 hours time-in-service or 5 months, whichever occurs first:

(i) Open the TGB oil filter plug cover (cover) identified as “b” in Detail “A” and Detail “B” in Figure 1 of Airbus Helicopters Emergency Alert Service Bulletin (EASB) No. 65.00.19 or Airbus Helicopters EASB No. 65A008, both Revision 0 and dated July 10, 2019 (EASB 65.00.19 or EASB 65A008), as applicable to your model helicopter, by removing any lockwire, opening the cover (b), and removing the strainer (e) using a screwdriver. Remove the TGB oil filter plug (plug) identified as “h” in Detail “B” in Figure 1 of EASB 65.00.19 or EASB 65A008, as applicable to your model helicopter, by removing the sealing compound at the base of the plug (h), marking the base of the plug (h) and the TGB housing (c), and removing and cleaning the plug (h) and the exterior surface of the TGB housing (c) surrounding the plug (h) installation area.

(ii) Using an adjustable or fixed head borescope with a 6 mm or larger diameter camera probe, inspect for operating oil (oil) retention and visibility of the two T holes in the TGB oil housing recess (housing recess) (towards the rear of the helicopter) identified as “g” in Section C-C in Figure 2 of EASB 65.00.19 or EASB 65A008, as applicable to your model helicopter.

(A) If there is any oil retention in the housing recess (g) and the two T holes are not completely visible as shown in photo 1, in the Accomplishment Instructions, paragraph 3.B.2.b., of EASB 65.00.19 or EASB 65A008, as applicable to your model

helicopter, before further flight, remove the TGB control rod and inspect for and remove any foreign objects in the TGB oil duct (oil duct) identified as “k” in Detail “D” of Figure 2 of EASB 65.00.19 or EASB 65A008, as applicable to your model helicopter.

(B) With all of the oil drained from the housing recess (g), inspect for oil retention and visibility of the two T holes in the housing recess (g) as required by paragraph (e)(1)(ii) of this AD.

(1) If there is any oil retention in the housing recess (g) and the two T holes are not completely visible, before further flight, replace the TGB.

(2) If there is no oil retention in the housing recess (g) and the two T holes are completely visible, before further flight:

(i) Inspect for any foreign objects in the oil duct identified as “k” in Section EE of Figure 3 of EASB 65.00.19 or EASB 65A008, as applicable to your model helicopter. If there is any foreign object, before further flight, remove each foreign object.

(ii) Inspect for oil flow at the end of the oil duct (k) BTP (q) cover by following the procedures in the second step through the sixth step, inclusive, of the Accomplishment Instructions, paragraph 3.B.3.b., of EASB 65.00.19 or EASB 65A008, as applicable to your model helicopter.

(iii) If the oil does not flow at the end of the oil duct (k) BTP (q) cover, before further flight, replace the TGB.

(iv) If the oil flows at the end of the oil duct (k) BTP (q) cover, before further flight, remove from service the TGB control rod bearing.

(2) As of the effective date of this AD, do not install a TGB on any helicopter unless, with the non-installed TGB in a level position using shims, the requirements of

paragraph (e)(1) of this AD have been accomplished. Unless already done, installation of a new TGB control rod bearing is also required. Accomplishment Instructions, paragraph 3.B.6., of EASB 65.00.19 and EASB 65A008, as applicable to your model helicopter, contain information pertaining to inspecting a non-installed TGB. A TGB with a log card entry showing it has passed the requirements in the Accomplishment Instructions, paragraph 3.B.6., of EASB 65.00.19 and EASB 65A008, as applicable to your model helicopter, is acceptable for compliance with this paragraph.

**(f) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Rotorcraft Standards Branch, FAA, may approve AMOCs for this AD. Send your proposal to: Rao Edupuganti, Aviation Safety Engineer, Regulations and Policy Section, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5110; email 9-ASW-FTW-AMOC-Requests@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, the FAA suggests that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office, before operating any aircraft complying with this AD through an AMOC.

**(g) Additional Information**

The subject of this AD is addressed in European Union Aviation Safety Agency (EASA) AD No. 2019-0165-E, dated July 12, 2019. You may view the EASA AD on the internet at <https://www.regulations.gov> in Docket No. FAA-2020-0618.

**(h) Subject**

Joint Aircraft Service Component (JASC) Code: 62, Tail Rotor Gearbox.

**(i) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Airbus Helicopters Emergency Alert Service Bulletin (EASB) No. 65.00.19, Revision 0, dated July 10, 2019.

(ii) Airbus Helicopters EASB No. 65A008, Revision 0, dated July 10, 2019.

Note 1 to paragraph (i)(2): Airbus Helicopters EASB Nos. 65.00.19 and 65A008, each Revision 0 and dated July 10, 2019, are co-published as one document along with Airbus Helicopters EASB Nos. 65.00.09 and 65.06, each Revision 0 and dated July 10, 2019, which are not incorporated by reference in this AD.

(3) For service information identified in this AD, contact Airbus Helicopters, 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone 972-641-0000 or 800-232-0323; fax 972-641-3775; or at <https://www.airbus.com/helicopters/services/technical-support.html>.

(4) You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call 817-222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email [fedreg.legal@nara.gov](mailto:fedreg.legal@nara.gov), or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on October 6, 2020.

Lance T. Gant, Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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